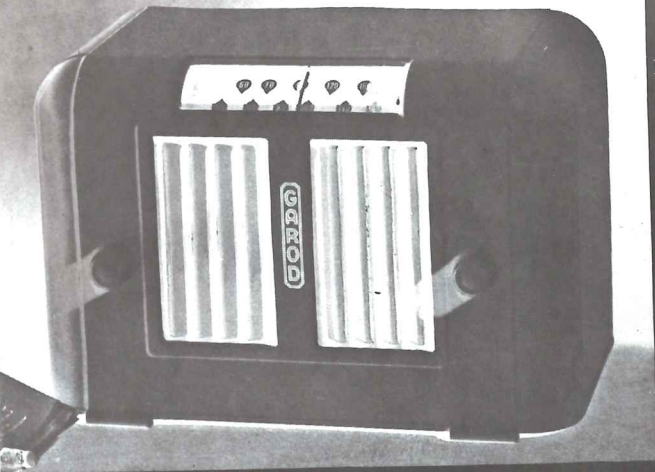




14 The dial is of the easily read light-face type with an arrow indicator. The cabinet is constructed in a manner to allow for either a four or five tube chassis. This company has the unique distinction of being both a custom molder and a radio manufacturer.

RCA's table model 15X is a good example (Fig. 4). The cabinet is a modern continental type incorporating an angle vision dial. This longitudinal dial, located at the top of the cabinet toward the front, resembles in many respects the dials to be found on the larger more expensive sets which this company makes. The color of the material is a variegated walnut.

Perhaps one of the most unusual radios of the year is the Sonora radio bedlamp combination. (Pictured in MODERN PLASTICS, Jan. 1940, p. 37.) Here within a small housing that may be attached to the head of a bedstead by clever arrangement both a lamp and a radio have been incorporated. Phenolic plastics were selected to resist the heat generated by both the incandescent lamp and the radio tubes. Moreover the material had to have the structural strength to withstand the constant weight strain of supporting the radio chassis and the possibility of frequent "house-keeping" bumps. Thus far there have been few failures reported from the field.

Silvertone, one of Sears Roebuck's small novelty sets (pictured in MODERN PLASTICS, March 1940, p. 31) is using a phenolic housing. The set, sturdily constructed, is intended to withstand hard service and its streamlined fluted contours bespeak its character.

No material lends more characteristic distinction to the cabinet of a radio set than the cast phenolic type. Because the materials by this method are cast or poured into molds, by using two or more colors an infinite variety of configurations is possible. Emerson in their 1941 model No. 375 has taken full advantage of the beautiful variegations which are available (Fig. 9). These sets are offered in Mexican onyx, blue onyx, Brazilian onyx and red onyx. While the manufacturing process of making cabinets by this method entails more operations through the increased finishing required, it is offset through the striking beauty of the results which are obtained. Basically the material is the same as that which is used in the conventional molding method; therefore, the same electrical properties are obtained. In some physical respects the molded cabinets differ from cast cabinets.

Among the more important advantages of using cast phenolics is the inexpensive cost of tooling. In manufacturing molds for casting, the extreme mechanical precision essential for compression molds is unnecessary. For this reason, use of cast resins make changing models less costly. A very recent strikingly designed, uniquely colored example is one being manufactured by Anthony Martinek (Fig. 10). The radio cabinet also houses a speedometer dial electric clock. Still another cast phenolic cabinet has been made by the Fada Radio & Electric Corp. with an easily read circular dial. By using colors of extremely different values, an interesting effect is attained.



14—Ivory Beetle is used for the cabinet of this newly designed Garod radio introduced for the 1941 market.

15—Farnsworth employs Plaskon for a portable model with corner louvers supplying a decorative note. These light colored urea cabinets, because of their translucent quality have a wide popular appeal

sets both large scale low cost production and style were important factors with which to be reckoned. In the brisk competition of this price market pennies tell a big story. Yes, fractions of cents often represent the difference between red or black ink. Emerson, one of the long established users of plastics, widely experienced in their results, believes that these materials pave the radio highway to success. Mechanically, these cabinets give a minimum amount of trouble both in manufacturing and after they are in the ultimate purchasers hands. When they arrive at the Emerson plant they are ready to be assembled. The molds are so constructed and so polished as to reduce the finishing to a negligible factor. The well adapted styles are represented in the varied range of 1940 models.

The Remler Co. are in production on a unit which depends upon the simplicity of its lines for style (Fig. 3).

Phenolic plastics as they are used in radio sets go a long way in telling their own story. The material may not be recognized as such, all the main whatever the composition may be, it does a creditable job. Year in and year out, North East or West, Winter or Summer the radio set is given to the work. Little consideration is given to the work. Perhaps a tube goes bad, then "off the air" is directed to the working mechanism. What have played an important role as a housewife have been, since the beginning of wireless transmission, an essential material in the construction of the operating parts of all sets. Phenolic plastics used universally as the bonding agent in the manufacture of laminates, which because of their electrical properties and their stability have an important requirement in the construction of intricate electrical instruments.

In one of the RCA models now on the market there are in all 23 pieces made from laminated materials, not to mention 16 parts which are of phenolic material (Fig. 11).

Of the small parts which are used in radio sets mica and padder condenser accounted for a large number (see Fig. 11). In the smaller sets being made chassis parts made from phenolic materials and this class of moldings is important, if that is conceivable. Without it would be impossible otherwise to construct in quantities the small watch-like parts.

In answering the demands of the style-conscious buying public the designers have not only failed to explore all possible plastic formaldehydes they have found plastic formaldehydes of the phenolic type, at the same time offering in addition whatever

16—Available in either walnut or ivory, this General Electric table model has a built-in antenna and illuminated dial. The simplicity of the housing is characteristic of the sets. **17**—RCA's New Yorker, in ivory or brown plastic, is trimmed with a contrasting triple band running around the base. The dial is set at a convenient angle for



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Phenolic plastics as they are used in radio cabinets go a long way in telling their own story. While the material may not be recognized as such, all know that in the main whatever the composition may be it does a creditable job. Year in and year out, North, South, East or West, Winter or Summer the radio performs. Little consideration is given to the works within, unless perhaps a tube goes bad, then "off the air" attention is directed to the working mechanism. While phenolics have played an important role as a housing material they have been, since the beginning of wireless sound transmission, an essential material in the construction of the operating parts of all sets. Phenol has been used universally as the bonding agent in the manufacture of laminates, which because of their outstanding electrical properties and their stability have made them an important requirement in the construction of these intricate electrical instruments.

In one of the RCA models now in production there are in all 23 pieces made from laminated phenolic materials, not to mention 16 parts which are of conventional molded phenolic material (Figs. 12 & 13).

Of the small parts which are used phenolic molded mica and padder condenser accounted for a large number (see Fig. 11). In the smaller sets which are now being made chassis parts made from these types of materials and this class of moldings are even more important, if that is conceivable. Without plastics it would be impossible otherwise to construct and produce in quantities the small watch-like parts required.

In answering the demands of the style conscious radio buying public the designers have not overlooked nor failed to explore all possible plastics. In the urea-formaldehydes they have found plastics possessing the general characteristics of the phenolic types and at the same time offering in addition whatever shade of color

is desired with any selected degree of translucency. Among the new 1940 models there are innumerable examples of sets made from these materials which have taken full advantage of their appealing color properties particularly the delicate ivory translucent models.

In adapting the urea materials to radio cabinets it has been necessary to take into account the characteristics of the material. Obviously with light colors it has been necessary to design properly at points of direct interior light and heat exposure. It has also been important to make correct shrinkage allowances. Manufacturers who have abided by the suggestions of either raw material manufacturers or their molders have encountered no difficulty.

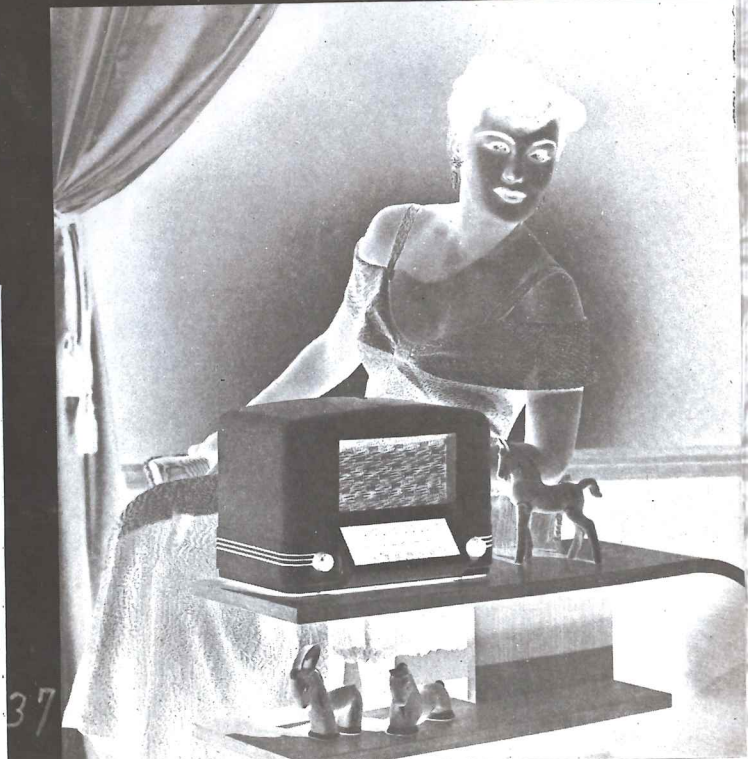
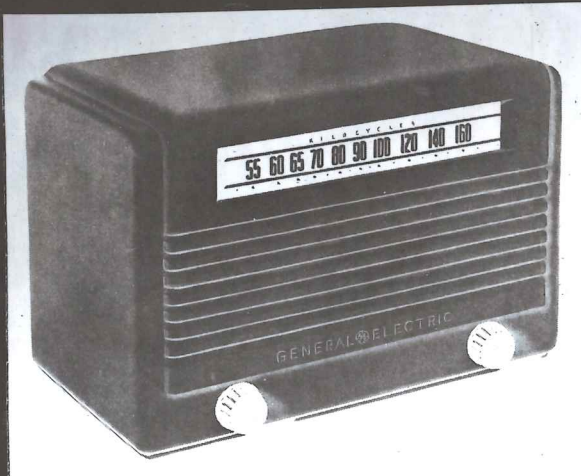
The Garod Radio Corp. is meeting with marked success in one of their units having a urea cabinet (Fig. 14). Straight vertical fluted speaker lines, knobs balanced on either side for tuning and for volume give the set a dignified appearance. The horizontal contrasting colored dial is well located.

The Farnsworth organization produces several models which are significant examples where urea cabinets have been used. One of them is interesting in that it incorporates a molded carrying handle of the same type of material. (Pictured in MODERN PLASTICS, Feb. 1940, p. 37.) One of the other cabinets has a handle of a contrasting colored material (Fig. 15).

The General Electric Co. has two sets among the many which they make which use urea plastics to excellent advantage. (Pictured in MODERN PLASTICS, March 1940, p. 31.) The designs of the cabinets themselves are interesting, especially one of them which has as a station selector a disk molded from the same material rotating on an axis parallel to the front of the housing. Only a small portion is exposed at one time. The volume is controlled by an (Please turn to page 86)

16—Available in either walnut or ivory Textolite, this General Electric table model has a 5-in. speaker, built-in antenna and illuminated dial. Utter simplicity of the housing is characteristic of this year's sets. 17—RCA's New Yorker, in ivory, black and brown plastic, is trimmed with a contrasting colored triple band running around the base. Edge-lighted dial is set at a convenient angle for full vision

16



17

Luxury liner

Meeting strict demands plastics prove serviceable and smart for shipboard décor



THE S.S. America, largest passenger liner ever constructed in the United States uses plastics for decorative effects in its distinctive interiors. With a displacement tonnage of 35,440, this is the first of 500 merchant vessels to be constructed during the next ten years, according to a plan laid down by the United States Maritime Commission. Barred by the Neutrality Act from the North Atlantic trade, for which she was designed, this sumptuous modern steamship (shown above) will inaugurate a fortnightly schedule of vacation voyages to neutral ports in the West Indies.

The new maritime building code of stringent safety requirements imposed many structural restrictions,

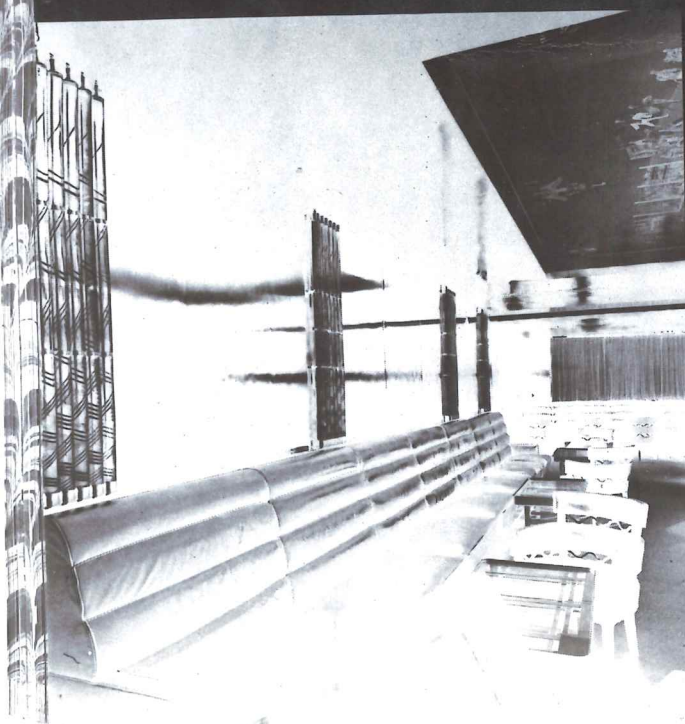
necessitating the use of new materials and new methods. Although at first it seemed as if the search for products that would conform to the new law would imply limitations in effects, quite the contrary proved to be true. The discovery of new and more interesting materials, among them plastics, helped to give the ship the freshness of feeling and lack of stylism that is its greatest charm. More than 90 percent of the vessel is constructed of non-inflammable materials.

In many of the public rooms, and there are 23 of them on the ship, laminated plastics—easily cleaned, cigaret and alcohol-proof—are used for the table tops. Colors and designs vary to harmonize with the decorative scheme of each room. This same type of wear-resistant material was also employed to surface dressers and bureaus in the staterooms, cabins and suites.

The two main entrances to the gay and sparkling ballroom, with its color scheme of white, silver, light gray and tones of soft rich red, are flanked by sculptured pieces formed of cast phenolic in a pale grayish-lavender tint. Exemplifying a stylized fruit motif these cast resin sculptures stand about 22 in. high and are supported on white pedestals (below, at right).

Directly off the ballroom is a (Please turn to page 96)

Panels of carved Lucite rods, at left, complement the indirect lighting in one of the cocktail lounges. Stylized fruit sculptures designed by Breeding Furst and cast in Marblette by Art Plastic Co. flank either side of the ballroom entrance shown at right. Fans with Micarta blades, and Formica table tops are found throughout the ship



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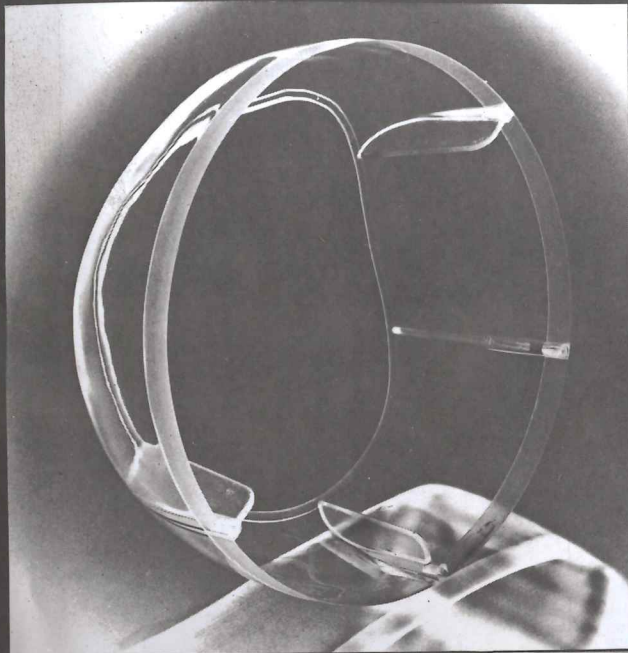
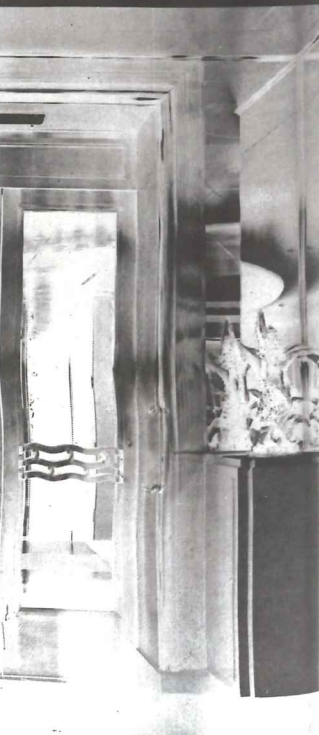
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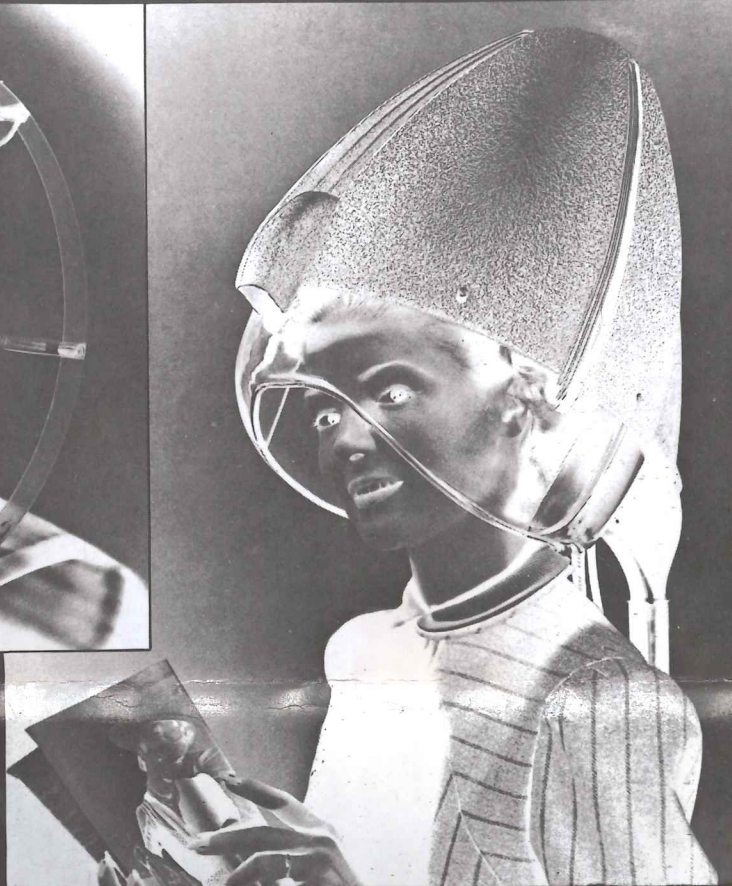
to the gay and sparkling me of white, silver, light ed, are flanked by sculp- enolic in a pale grayish- stylized fruit motif these ut 22 in. high and are low, at right).

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Louver structure of the interior and the slightly curved sides of the plastic front (above) are scientifically adapted for quick hair drying under the Vue-Gene machine (left). Molded of pink transparent Crystallite by General Electric Co. for Eugene, Ltd., the extension is lightweight and serviceable



PHOTO, COPYRIGHT 1940, EUGENE, LTD.

Halo-hood dryer

A large transparent molded acrylic extension allows all-around vision

TWENTY-SIX ounces of clear acrylic resin—in a large molded piece—bring a new freedom to the women's world. A completely new transparent front for the Vue-Gene hair dryer, manufactured by Eugene, Ltd., has changed the dreaded session of confinement under a dark, gloomy dryer into a comparatively comfortable period. Admitting light and permitting unobstructed vision on all sides, the clear plastic front creates an effect of cleanliness and ease.

Probably one of the largest thermoplastic pieces ever molded in this country, the Vue-Gene plastic front is made of transparent plastic in shades that will harmonize with the interior decoration of any shop. Tinted a delicate pink, the material blends well with the gray, black, brown or blue of the rest of the machine and at the same time is flattering to the complexion.

An important factor in accomplishing the job was the willingness of the customer to permit necessary changes in the design. This facilitated the work of production and made it possible to turn out a unit that possessed the ultimate in appearance and function. When material and design problems had been settled, a carefully engineered mold allowed quick heating, uniform cooling and sufficient density that eliminated bubbles in the finished part.

In the original model, two of the louvers or baffles extended above the rim of the piece, since it was the customer's belief that only this arrangement could permit proper circulation of the air in the completed assembly of the hair dryer. Two mounting posts also extended above the rim and added to the impracticability of the molding. Appre- (Please turn to page 98)

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